REMARKS

In the Office Action of October 31, 1985, the invention herein is rejected under 35 USC 103 over Steudel in view of Torby or Grabowski et al. It is suggested that these references taken in specified combination show the setting of upper and lower regions of antenna 22 in oppositely disposed directions. However, it is clear that these references teach away from the invention herein, because they suggest that this can only be accomplished electronically, whereas the invention herein is directed toward "physically" warping the array antenna. The amendment emphasizes this feature, which calls for getting physical in designing the antenna, rather than relying upon complex electronics to accomplish phase amplitude monopulse.

Further, to clarify the record, Steudel is directed exclusively toward phase comparison monopulse, and does not feature the use of any amplitude comparison techniques or concepts, as the Office Action appears to suggest.

The main thrust of Steudel is remote from the invention herein, being directed toward correcting the effects of wide bandwidth on direction finding of a phase-phase tracking antenna. The invention herein is instead directed toward a physical or mechanical implementation of phase amplitude monopulse, which avoids the complexity of a strictly electronic approach.

As noted on page 1, line 15 of the application, phase amplitude techniques are particularly suited for use in radar systems which are mechanically scanned about one axis and electrically scanned about a second axis. Stuedel, on the other hand, is directed toward correction techniques in an array

antenna which scans elevation and azimuth electrically. As indicated in Steudel at column 4, lines 26 through 29, two difference channels (in conjuction with two sum channels, of course) are required to establish the needed azimuth and elevation indications. In phase amplitude arrangements, only one difference channel (in conjuction with a single sum channel) accomplishes the same result. Clearly, Steudel is far off the mark.

Torby and Grabowski et al. are similarly far removed from the instant invention, because neither fails to suggest physical warping of the antenna, and neither suggests that it be read in combination with Steudel.

In view of the above, it is respectfully urged that the application and claims 1 through 5 are in condition for allowance and grant subject, of course, to the effect of the secrecy order which is currently in force. Any action by the Examiner, consistent with the limitations of the current secrecy order, to promote that ultimate result, in due course, is appreciated.

Respectfully submitted,

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